REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 7-13 are pending, where claims 1-6 were previously canceled. By this communication, claim 7 is amended and claims 13-15 are added. Support for the subject matter recited in newly added claim 13 can be found, for example, on page 4 lines 18-26 of the disclosure.

In numbered paragraph 6 on page 2 of the Office Action, the Examiner objected to the title for allegedly being non-descriptive of the invention. Applicants respectfully traverse this rejection. However, in an effort to expedite prosecution the title has been amended to address the Examiner's concerns. Withdrawal is respectfully requested.

In numbered paragraph 7 on page 3 of the Office Action claim 7 was objected to for alleged informalities. Applicants have amended claim 7 to address the Examiner's concerns, and request that this objection be withdrawn.

In numbered paragraph 9 on page 3 of the Office Action, claims 7 and 8 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Shimizu et al. (U.S. Patent No. 6,201,696). Applicants respectfully traverse this rejection.

As shown in Figures 1a through 6, exemplary embodiments are directed to a power semiconductor module that includes a substrate 2 sandwiched between a bottom metallization layer 3 and a top metallization layer 4. Both the top and bottom metallization layers 3 and 4 cover only a portion of the respective surface of the ceramic substrate 2, so that first corners 24 and second corners 23 are formed by the top and bottom metallization layers, respectively. A polyamide 5 is applied in the corners 24 and in the junction between the metallization layer 4 and ceramic substrate 2 such that these gaps are filled with insulating material.

Independent claim 7 broadly encompasses the aforementioned features, by reciting among other elements, a first electrically insulating material disposed in a corner region formed by a first electrically conductive layer and a peripheral region of a electrically insulating substrate, wherein the first electrically insulating material is a polyimide.

Contrary to the Examiner's assertions, the *Shimuzu* patent fails to anticipate Applicants' claims. The *Shimuzu* patent discloses a semiconductor module in which an epoxy resin or a polyester resin is formed at a corner between a top metallization layer and an insulating substrate. This configuration is applied in an effort to increase a creeping distance for achieving a higher breakdown voltage. See column 12, lines 49-58.

Applicants note, however, that the epoxy or polyester resin as disclosed in the *Shimuzu* patent is not analogous to the polyimide material of the first electrically insulating material as recited in Applicants' claims. As discussed in the background of section of Applicants' disclosure, the use of an epoxy or polyester resin allow a small, air filled cavity to be established under the metallization layer in a neighborhood of the metallization border. In contrast, the polyimide has inherent characteristics or properties that enable it to fill gaps in a junction between the top metallization layer and the insulating substrate. As a result, the triple point between the first electrically conductive layer, the electrically insulating substrate, the second insulating material is protected by the polyimide insulating material. For these reasons, a *prima facie* case of anticipation has not been established. Withdrawal of this rejection, therefore, is respectfully requested.

In numbered paragraph 10 on page 5 of the Office Action, the Examiner indicates that claims 9-12 include allowable subject matter. Applicants appreciate this

acknowledgment and have added independent claim 14 and 15 to recite the features of claims 9 and 10, respectively. Favorable consideration and allowance of these claims are respectfully requested.

Newly added claim 13 depends from claim 7 and recites that the first electrically insulating material fills gaps in a junction between the first electrically conductive layer and the electrically insulating substrate. As discussed above, the polyester or epoxy resin disclosed in the *Shimuzu* patent merely protects the borders of the metallization layer that is disposed on the ceramic substrate. Due to the inherent properties of polyester and/or epoxy resin these materials cannot achieve a structural relationship between a first electrically conductive layer and an electrically insulating substrate as recited in claim 13. Accordingly, favorable consideration and allowance of claim 13 is respectfully requested.

Conclusion

Based on at least the foregoing amendments and remarks, Applicants submit that claims 7-12 are allowable, and this application is in condition for allowance. In the event any issues remain, the Examiner is invited to contact Applicants' representative identified below.

Respectfully submitted,

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